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EXAMINER

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3743

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/584,164
Filing Date: April 09, 2007
Appellant(s): MEERPOHL ET AL.

James E. Howard
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed October 8, 2010 appealing from the Office action mailed April 28, 2010.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

16. (Rejected) A method for drying laundry in a dryer comprising a housing and a drum receiving the laundry and mounted for rotation with respect to the housing, the method comprising the acts of:

performing a drying program including a heating-up phase, a drying phase, and a cooling-down phase;

performing an anti-crease cycle after the drying phase has been performed, the anti-crease cycle having alternating intervals including rotary movement time intervals, in which the drum is rotated to agitate the laundry, and stoppage time intervals, in which the drum stops rotating and the laundry is at rest, the duration of the rotary movement intervals decreasing in relation to the stoppage time intervals in response to an operating parameter.

17. (Rejected) The method according to claim 16, wherein the operating parameter includes the length of time of the anti-crease cycle.

18. (Rejected) The method according to claim 16, further comprising the act of

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detecting the temperature of the laundry with a sensor and the operating parameter includes a decrease in the temperature of the laundry.

19. (Rejected) The method according to claim 16, further comprising the act of detecting the residual moisture of the laundry with a sensor and the operating parameter includes a decrease in the residual moisture of the laundry.

20. (Rejected) The method according to claim 16, wherein the operating parameter includes the pre-selected drying program selected by the user.

21. (Rejected) The method according to claim 16, further comprising the act of receiving an amount of laundry in the dryer being preset by a user and the operating parameter includes the amount of the laundry.

22. (Rejected) The method according to claim 16, further comprising the act of detecting an amount of laundry in the dryer with a sensor and the operating parameter includes the amount of the laundry.

23. (Rejected) The method according to claim 16, further comprising the act of detecting at least one of a quantity of laundry, a heating-up time, a laundry moisture, a laundry moisture profile, a laundry specific conductance, a profile of the laundry specific conductance, a moisture content and/or the moisture profile, a temperature of the

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laundry, a temperature profile of the laundry, a temperature of the drying air, a temperature profile of the drying air in the drum of the laundry dryer, a comparison of the moisture content, a moisture profile, a temperature of the drying air, a temperature profile of the drying air in the drum of the laundry dryer between entry into the drum and exit from the drum, and a time before reaching a drying target.

24. (Rejected) The method according to claim 16, wherein the act of performing the anti-crease cycle includes rotating the drum in opposite directions during subsequent rotary movement time intervals.

25. (Rejected) The method according to claim 16, wherein the duration of the anti-crease cycle is between about one and five hours.

26. (Rejected) The method according to claim 16, wherein the act of performing the anti-crease cycle includes four subsequent time intervals starting with a first time interval and ending with a fourth time interval, each time interval including the rotary movement time intervals and stoppage time intervals, the rotary time interval comprising between about 20% and 90% of the first time interval, the rotary time interval comprising between about 10% and 70% of the second time interval, the rotary time interval comprising between about 1% and 60% of the third time interval,

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and the rotary time interval comprising between about 1% and 30% of the fourth time interval.

27. (Rejected) The method according to claim 26, wherein the duration of the rotary movement time interval remains substantially the same during each of the four subsequent time intervals and the duration of the stoppage time interval during the fourth time interval is greater than the duration of the stoppage time interval during the first time interval.

28. (Rejected) A laundry dryer comprising:

- a housing;

- a drum receiving the laundry and mounted for rotation with respect to the housing;

- a motor coupled to the drum for driving rotation of the drum;

- an inlet duct providing an air flow to the drum and a heating device selectively heating air in the inlet duct;

- an outlet duct receiving the air flow from the drum;

- a control device coupled to the motor and controlling rotation of the drum, the control device performing an anti-crease cycle after the drying phase has been performed, the anti-crease cycle including alternately rotating the drum during rotary movement time intervals and stopping rotation of the drum during stoppage time

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intervals, the control device decreasing the duration of the rotary movement intervals in relation to the stoppage time intervals in response to an operating parameter.

29. (Rejected) The laundry dryer of claim 28, further comprising a timing element providing a length of time of the anti-crease cycle to the control device and the operating parameter including an increase in the length of time of the anti-crease cycle.

30. (Rejected) The laundry dryer of claim 28, further comprising a temperature sensor detecting the temperature of the laundry and providing a temperature signal to the control device indicating the temperature of the laundry, the operating parameter including the temperature signal.

31. (Rejected) The laundry dryer of claim 28, further comprising a electrodes detecting a moisture level of the laundry and providing a moisture signal to the control device indicating the moisture level of the laundry, the operating parameter including the moisture signal.

32. (Cancelled)

33. (Rejected) The laundry dryer of claim 28, wherein the control device performs a drying cycle in the form of an anti-crease cycle that includes alternatingly rotating the drum during rotary movement time intervals and stopping rotation of the drum during

stoppage time intervals, the control device decreasing the duration of the rotary movement intervals decreasing in relation to the stoppage time intervals in response to an operating parameter.

34. (Rejected) The laundry dryer of claim 33, further comprising a timing element providing a length of time of the anti-crease cycle to the control device and the operating parameter including an increase in the length of time of the anti-crease cycle.

35. (Rejected) The laundry dryer of claim 33, further comprising a temperature sensor detecting the temperature of the laundry and providing a temperature signal to the control device indicating the temperature of the laundry, the operating parameter including the temperature signal.

36. (Rejected) The method according to claim 16 and further comprising performing the drying program again including another heating-up phase, another drying phase, and another cooling-down phase and performing another anti-crease cycle after the another drying phase of the drying program has been performed, this another anti-crease cycle having alternating intervals including rotary movement time intervals, in which the drum is rotated to agitate the laundry, and stoppage time intervals, in which the drum stops rotating and the laundry is at rest, the duration of the rotary movement intervals decreasing in relation to the stoppage time intervals, and the duration of these rotary movement intervals decreasing in relation to these stoppage

time intervals in a different manner than the duration of the rotary movement intervals decrease in relation to the stoppage time intervals in connection with the anti-crease cycle of the first-mentioned drying phase.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

Claims 16-19, 23, and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janke (US 3,702,030) in view of Hughes (US 2,961,776).

Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janke in view of Hughes in view of St. Louis (US 2003/0097764).

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Janke in view of Hughes in view of Liebermann (US 3,060,591).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Janke in view of Hughes in view of Worst (US 3,309,783).

Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janke in view of Hughes.

Claims 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janke in view of Hughes in view of Kohlman et al. (US 6,381,870).

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

3,702,030	Janke	11-1972
2,961,776	Hughes	11-1960
2003/0097764	St. Louis	5-2003
3,060,951	Liebermann	10-1962
3,309,783	Worst	3-1967

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

Claims 16-19, 23, and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janke (US 3,702,030) in view of Hughes (US 2,961,776). The claims are reasonably and broadly construed, in light of the accompanying specification, to be disclosed by Janke as comprising:

performing a drying program including a heating-up phase, a drying phase, and a cooling-down phase at column 7 lines 13-35;

performing an anti-crease cycle having alternating intervals including rotary movement time intervals, in which the drum is rotated to agitate the laundry, and stoppage time intervals, in which the drum stops rotating and the laundry is at rest, the duration of the rotary movement intervals decreasing in relation to the stoppage time intervals in response to an operating parameter at column 5 lines 18-48; or alternatively:

a housing **10**;

a drum **11** receiving the laundry and mounted for rotation with respect to the housing;

a motor **17** coupled to the drum for driving rotation of the drum;

an inlet duct **13** providing an air flow to the drum and a heating device selectively heating air in the inlet duct; an outlet duct receiving the air flow from the drum;

a control device **23** coupled to the motor and controlling rotation of the drum, the control device performing an anti-crease cycle including alternately rotating the drum during rotary movement time intervals and stopping rotation of the drum during stoppage time intervals, the control device decreasing the duration of the rotary movement intervals decreasing in relation to the stoppage time intervals in response to an operating parameter at column 5 lines 18-48. Janke also discloses the claimed operating parameter includes the length of time of the anti-crease cycle as shown in figure 3, act of detecting the temperature of the laundry with a sensor and the operating parameter includes a decrease in the temperature of the laundry at column 8 lines 31-

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56, act of detecting the residual moisture of the laundry with a sensor and the operating parameter includes a decrease in the residual moisture of the laundry at column 7 lines 13-35, act of detecting at least one of a quantity of laundry, a heating-up time, a laundry moisture, a laundry moisture profile, a laundry specific conductance, a profile of the laundry specific conductance, a moisture content and/or the moisture profile, a temperature of the laundry, a temperature profile of the laundry, a temperature of the drying air, a temperature profile of the drying air in the drum of the laundry dryer, a comparison of the moisture content, a moisture profile, a temperature of the drying air, a temperature profile of the drying air in the drum of the laundry dryer between entry into the drum and exit from the drum, and a time before reaching a drying target at column 8 lines 31-56, timing element providing a length of time of the anti-crease cycle to the control device and the operating parameter including an increase in the length of time of the anti-crease cycle as shown in figure 3, temperature sensor detecting the temperature of the laundry and providing a temperature signal to the control device indicating the temperature of the laundry, the operating parameter including the temperature signal at column 8 lines 31-56, electrodes detecting a moisture level of the laundry and providing a moisture signal to the control device indicating the moisture level of the laundry, the operating parameter including the moisture signal at column 7 lines 13-35. Janke discloses the invention as claimed, except for the claimed feature after the drying phase has been performed, an anti-crease cycle is introduced. Hughes, another laundry dryer, discloses that feature at column 5 line 63 through column 6 line 3. It would have been obvious to one skilled in the art to combine the teachings of

Janke with the anti-crease feature of Hughes for the purpose of optimizing energy by minimizing the amount of energy used in laundry drying by use of an anti-crease feature.

Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janke in view of Hughes in view of St. Louis (US 2003/0097764). Janke in view of Hughes discloses the claimed invention, as rejected above, except for the claimed user pre-selection. St. Louis, another dryer, discloses that feature in the abstract. It would have been obvious to one skilled in the art to combine the teachings of Janke in view of Hughes with the user pre-selection feature in order to allow various operator controls for different laundering requirements.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Janke in view of Hughes in view of Liebermann (US 3,060,591). Janke in view of Hughes discloses the claimed invention, as rejected above, except for the claimed step of detecting an amount of laundry. Liebermann, another dryer, discloses that feature at column 2 lines 18-69. It would have been obvious to one skilled in the art to combine the teachings of Janke in view of Hughes with the detecting an amount of laundry feature in order to allow various operator controls for different laundering requirements.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Janke in view of Hughes in view of Worst (US 3,309,783). Janke in view of Hughes discloses the claimed invention, as rejected above, except for the claimed step of reverse rotation. Worst, another dryer, discloses that feature at column 1 lines 14-60. It would have been obvious to one skilled in the art to combine the teachings of Janke in view of Hughes

with the reverse rotation feature in order to allow various operator controls for different laundering requirements.

Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janke in view of Hughes. Janke in view of Hughes discloses the claimed invention, as rejected above, except for the claimed stop time intervals with subsequent magnitudes. It would have been an obvious matter of design choice to recite that feature, since the teachings of Janke in view of Hughes would perform the invention, as claimed, regardless of the recited time intervals and magnitude.

Claims 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janke in view of Hughes in view of Kohlman et al. (US 6,381,870). Janke in view of Hughes discloses the claimed invention, as rejected above, except for the claimed anti-crease feature. Kohlman, another dryer, discloses that feature at column 4 line 53 through column 5 line 17. It would have been obvious to one skilled in the art to combine the teachings of Janke in view of Hughes with the anti crease feature of Kohlman in order to allow various operator controls for different laundering requirements.

(10) Response to Argument

Janke in view of Hughes obviousness

Appellants argue that the claims should be allowed over the Janke in view of Hughes references because de-wrinkle cycle is the same as the drying cycle. In the Hughes reference, drying and anti-wrinkling are disclosed as separate steps (column 5 line 68 discloses drying while also disclosed is a need for de-wrinkling at line 70).

Further on, it discloses that the air flow is lowered such that the temperature is raised.

When this step occurs, it is separate from drying such that de-wrinkling occurs.

Examiner construes the claimed anti-crease to be patentably the same as the de-wrinkling disclosure because both have the same structure and function.

The assertion by appellants that Hughes does not suggest an anti-crease cycle is not consistent with the disclosure of that reference because at column 5 line 72, an optimum air flow for drying synthetics is disclosed, then on line 73, "for the de-wrinkle cycle" is disclosed. Clearly those are separate steps such that Janke in view of Hughes discloses the invention as claimed. The Janke reference inherently discloses this feature because the structure and function of that teaching reference anticipates all of the claimed features as rejected. Furthermore, it necessarily follows that it would be desirable to have an anti-crease cycle, because when a dryer is operated as claimed, in light of Janke, anti-crease would occur.

Also, statements of desirability and intended uses do not overcome the prior art unless the claimed invention is structurally and functionally different from the prior art. In this application, the claimed structure and function is met by Janke because the structure and function of that reference meets the desirability of an anti-crease function.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

In addition, appellants argue that an anti-crease cycle is performed after a drying cycle but "after" is construed to be ambiguous because it is not clear exactly when that cycle is performed. The claim construction results in the claims being rejected by the prior art, as discussed above.

Janke/ Hughes/ St. Louis obviousness

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Janke/ Hughes/ Liebermann obviousness

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Janke/ Hughes/ Worst obviousness

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically

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pointing out how the language of the claims patentably distinguishes them from the references.

Janke/ Hughes/ Kohlman obviousness

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,/Stephen Gravini/

Conferees:

/Kenneth B Rinehart/

Supervisory Patent Examiner, Art Unit 3743

/Michael Phillips/ RQAS

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